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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/998,712 | 11/30/2001 | Mitsuru Muramoto | KOKU-0007 | 7200 |

7590 09/28/2004
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EXAMINER

GELIN, JEAN ALLAND

ART UNIT PAPER NUMBER

2681

DATE MAILED: 09/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/998,712

Applicant(s)

MURAMOTO ET AL.

Examiner

Jean A Gelin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16, 23-38 and 45-47 is/are rejected.
- 7) ☒ Claim(s) 17-22 and 39-44 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-3, 11-16, 23-25, 33-38, and 45-47 are rejected under 35 U.S.C. 102(e) as being anticipated by Myers (US 6,304,762).

Regarding claims 1, 12, 23, 34, Myers teaches a method of constructing wireless telecommunication cells between base stations and subscriber stations, the base stations each having a cell, the cell having a predetermined number of sectors (fig. 1, each node is divided in four sectors), comprising the steps: dividing each of the cells into four sectors around each of the base stations (fig. 1, col. 3, lines 19-22); assigning distinct communication signals respectively to the four sectors at each of the base stations so that a common one of the distinct communication signals is assigned to at

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least a pair of adjacent ones of the sectors of the corresponding two adjacent ones of the cells (col. 3, lines 46-63, col. 4, lines, col. 7, lines 16-28); and transmitting the assigned distinct communication signals in each of the four sectors between the base stations and the subscriber stations in the corresponding cells (col. 4, lines 18-50).

Regarding claims 2, 24, Myers teaches wherein the subscriber stations are fixedly located in a predetermined one of the sectors in a predetermined direction with respect to the base stations (col. 4, lines 39-64).

Regarding claims 3, 25, Myers teaches wherein the sectors are substantially equal four areas (fig. 1).

Regarding claims 11, 33, Myers teaches wherein a number of the distinct communication signals is four (communications via panel antennas 31-34, col. 3, line 53 to col. 4, line 38).

Regarding claims 13, 35, Myers teaches wherein the common one of the distinct communication signals is assigned to four adjacent sectors of the corresponding four adjacent cells (col. 4, lines 18-65).

Regarding claims 14, 36, Myers teaches wherein the distinct communication signals are each a combination of distinct frequencies and distinct communication wave directionalities (directional antenna of the remote has the capability to perform this function, col. 4, lines 39-65).

Regarding claims 15, 37, Myers teaches wherein two of the distinct communication signals are assigned to each of the sectors (col. 4, lines 5-38).

Regarding claims 16, 38, Myers teaches wherein the distinct communication signals are four distinct frequencies as denoted by F1, f2, F3 and F4 (col. 5, lines 4-10).

Regarding to claims 45-47, the claims includes limitations that are similar to claims 1, 12, and 13. Therefore, the claims are interpreted and rejected for the same reasons as set forth in the rejection of claims 1, 12, and 13 above.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4-8, 10, 26-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Myers et al. (US 6,304,762) in view of Dean (US 6,542,746).

Regarding claims 4-6, 8, 10, 26-28, 30, 32, Myers teaches all the limitations above except teaches wherein the sectors are substantially rectangular in shape.

However, the preceding limitation is known in the art of communications. Dean disclosed the cell is divided in four equal sectors, which cells and sectors can take the shape illustrated in figs. 5 and 7 (substantially rectangular, square, triangle). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to implement the technique of Dean within the system of Myers in order to reuse the frequency used in one cell to all cells.

Regarding claims 7, 29, Myers in view of Dean teaches all the limitations as recited above. Dean further teaches wherein the cells are staggered with each other (figs. 5 and 7).

Regarding claims 9, 31, Myers in view of Dean teaches all the limitations as recited above. Myers further teaches wherein the sectors are substantially equal four areas (fig. 1).

Allowable Subject Matter

5. Claims 17-22, 39-44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

| | | |
|------------------|--------------|------------|
| Seo | US 6,212,338 | 04/03/2001 |
| Hidebrand et al. | US 6,418,316 | 07/09/2002 |
| Johnson et al. | US 6,748,218 | 06/08/2004 |

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean A Gelin whose telephone number is (703) 305-4847. The examiner can normally be reached on 9:30 AM to 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R Hudspeth can be reached on (703) 308-4825. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JEAN GELIN
PRIMARY EXAMINER

JGelin
September 26, 2004

A handwritten signature in cursive script that reads "jean Gelin". The signature is written in dark ink and is positioned to the right of the typed name and date.